

REMARKS

This responds to the Office Action dated March 27, 2006, and the references cited therewith.

Claims 1, 7-11, and 15-17 are amended. Claims 4 and 14 are canceled. Claims 1-3, 5-13, and 15-17 are now pending in this application.

§102 Rejection of the Claims

Claims 1-3, 6, 8-13 and 16 were rejected under 35 U.S.C. § 102(b) as being anticipated by Scheiner et al. (U.S. Patent No. 6,415,183). Claims 1-17 were rejected under 35 U.S.C. § 102(e) as being anticipated by Casavant et al. (U.S. 2004/0088015). The rejections are traversed and reconsideration is respectfully requested.

Claim 1 has been amended to recite that the controller of the device is programmed to begin charging an output capacitor of the ventricular shock channel when ventricular fibrillation is detected, monitor respiratory activity via the thoracic impedance channel while the output capacitor is charging, deliver diaphragmatic pacing if respiratory arrest is detected and only if the output capacitor has not finished charging, and deliver a shock pulse after the output capacitor is charged. Claim 8 has been amended to recite a device that includes means for charging an output capacitor for delivering the shock therapy when ventricular fibrillation is detected, means for monitoring respiratory activity via measurement of thoracic impedance while the output capacitor is charging, means for delivering diaphragmatic pacing upon detection of respiratory arrest only if the output capacitor has not finished charging, and means for delivering a shock pulse after the output capacitor is charged. Claim 11 has been amended to recite a method that includes monitoring a ventricular sensing channel in order to detect ventricular fibrillation, begin charging an output capacitor of the ventricular shock channel when ventricular fibrillation is detected, monitoring a thoracic impedance channel in order to detect respiratory arrest while the output capacitor is charging, delivering diaphragmatic pacing upon detection of respiratory arrest only if the output capacitor is not finished charging, and delivering shock therapy through a ventricular shock channel after the output capacitor has charged.

Applicant finds no teaching or suggestion in either the Scheiner or Casavant reference for the recitations of claims 1, 8, or 11 as amended herein. In particular, neither the Scheiner nor the

Casavant reference teach or suggest: 1) monitoring respiratory activity by an impedance measurement while an output capacitor is charging in order to deliver a shock pulse after detection of ventricular fibrillation, or 2) delivering diaphragmatic pacing if respiratory arrest is detected and the output capacitor has not finished charging. Although the Scheiner reference does discuss monitoring respiratory activity and delivering diaphragmatic pacing, it does not discuss anything relating to monitoring for respiratory arrest after detection of ventricular fibrillation while an output capacitor is charging and delivering diaphragmatic pacing if respiratory arrest is detected and the output capacitor has not finished charging. Although the Casavant reference appears to discuss delivering phrenic nerve stimulation while an output capacitor is charging, applicant finds no teaching or suggestion in the reference for monitoring respiratory activity. The stated purpose in the Casavant reference for delivering phrenic nerve stimulation that increases respiratory activity is to increase cardiac output brought about by pressure changes within the thorax as a subject breathes (Paragraphs 11 and 16). The Casavant reference only appears to discuss monitoring physiological variables that reflect the adequacy of cardiac output such as pressure or oxygen saturation (Paragraph 41). No combination of the teachings in Casavant or Scheiner teach or suggest monitoring for respiratory arrest after detection of ventricular fibrillation and delivering diaphragmatic pacing upon detection of respiratory arrest only if the capacitor for delivering a defibrillation shock is not finished charging. Applicant respectfully submits that claims 1, 8, and 11 are patentable over the prior art of record.

The recitations of the remaining pending dependent claims 2-3, 5-7, 9-10, 12-13, and 15-17 include additional limitations to the subject matter recited by independent claims 1, 8, or 11, which recitations are also asserted to be neither taught nor suggested by the prior art of record. In particular, applicant finds no teaching or suggestion in the cited references for delivering diaphragmatic pacing when both respiratory arrest and ventricular fibrillation are detected only after one or more shock pulses are unsuccessful in terminating the ventricular fibrillation as recited by claims 5, 10, and 15.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (847) 432-7302 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,


AVRAM SCHEINER

By his Representatives,

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
P.O. Box 2938
Minneapolis, MN 55402
(847) 432-7302

Date 6-27-06

By


J. Kevin Parker
Reg. No. 33,024

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being filed using the USPTO's electronic filing system EFS-Web, and is addressed to: Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 27 day of June, 2006.

Name

Signature